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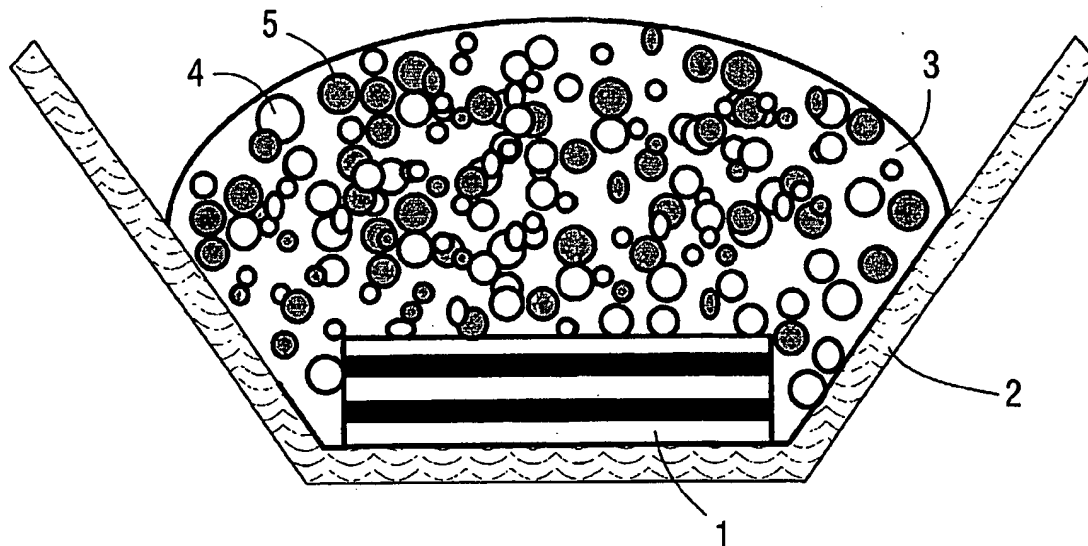
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- (71) Applicant (for DE only): **PHILIPS INTELLECTUAL PROPERTY & STANDARDS GMBH** [DE/DE]; Stein-  
damm 94, 20099 Hamburg (DE).
- (71) Applicant (for all designated States except DE, US):  
**KONINKLIJKE PHILIPS ELECTRONICS N.V.** [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
- (71) Applicant (for all designated States except US): **LU-MILEDS LIGHTING U.S., LLC** [US/US]; 370 West  
Trimble Road, MS 91 UK, San Jose, CA 95131 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **SCHMIDT, Peter** [DE/DE]; c/o Philips Intellectual Property & Standards  
GmbH, Weissshausstr. 2, 52066 Aachen (DE); **JUESTEL, Thomas** [DE/DE]; c/o Philips Intellectual Property &  
Standards GmbH, Weissshausstr. 2, 52066 Aachen (DE); **MAYR, Walter** [DE/DE]; c/o Philips Intellectual Property  
& Standards GmbH, Weissshausstr. 2, 52066 Aachen (DE); **BAUSEN, Hans-Dieter** [DE/DE]; c/o Philips Intellec-  
tual Property & Standards GmbH, Weissshausstr. 2, 52066 Aachen (DE); **SCHNICK, Wolfgang** [DE/DE]; c/o Philips  
Intellectual Property & Standards GmbH, Weissshausstr. 2, 52066 Aachen (DE); **HOEPPE, Henning** [DE/DE];  
c/o Philips Intellectual Property & Standards GmbH, Weissshausstr. 2, 52066 Aachen (DE).
- (74) Agent: **VOLMER, Georg**; Philips Intellectual Property &  
Standards GmbH, Weissshausstr. 2, 52066 Aachen (DE).
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(54) Title: LIGHT-EMITTING DEVICE COMPRISING AN EU(II)-ACTIVATED PHOSPHOR



(57) Abstract: The invention concerns a light emitting device comprising a light emitting structure capable of emitting primary light of a wavelength less than 480 nm and a luminescent screen comprising a phosphor of general formula  $(\text{Sr}_{1-a-b}\text{Ca}_b\text{Ba}_c\text{Mg}_d\text{Zn}_e)\text{Si}_x\text{N}_y\text{O}_z:\text{Eu}_a$ , wherein  $0.002 \leq a \leq 0.2$ ,  $0.0 \leq b \leq 0.25$ ,  $0.0 \leq c \leq 0.25$ ,  $0.0 \leq d \leq 0.25$ ,  $0.0 \leq e \leq 0.25$ ,  $1.5 \leq x \leq 2.5$ ,  $1.5 \leq y \leq 2.5$  and  $1.5 < z < 2.5$ . The invention also concerns a luminescent screen comprising a phosphor of general formula  $(\text{Sr}_{1-a-b}\text{Ca}_b\text{Ba}_c\text{Mg}_d\text{Zn}_e)\text{Si}_x\text{N}_y\text{O}_z:\text{Eu}_a$ , wherein  $0.002 \leq a \leq 0.2$ ,  $0.0 \leq b \leq 0.25$ ,  $0.0 \leq c \leq 0.25$ ,  $0.0 \leq d \leq 0.25$ ,  $0.0 \leq e \leq 0.25$ ,  $1.5 \leq x \leq 2.5$ ,  $1.5 \leq y \leq 2.5$  and  $1.5 < z < 2.5$ . The invention also concerns a phosphor of general formula  $(\text{Sr}_{1-a-b}\text{Ca}_b\text{Ba}_c\text{Mg}_d\text{Zn}_e)\text{Si}_x\text{N}_y\text{O}_z:\text{Eu}_a$ , wherein  $0.002 \leq a \leq 0.2$ ,  $0.0 \leq b \leq 0.25$ ,  $0.0 \leq c \leq 0.25$ ,  $0.0 \leq d \leq 0.25$ ,  $0.0 \leq e \leq 0.25$ ,  $1.5 \leq x \leq 2.5$ ,  $1.5 \leq y \leq 2.5$  and  $1.5 < z < 2.5$ .